

**What is claimed is:**

**[Claim 1]** 1. A chemical mechanical polishing process comprising:  
    providing a substrate having thereon a top bulk metal layer and a lower barrier layer;  
    polishing said top bulk metal layer at a substantial constant removal rate to expose said barrier layer by utilizing a first platen and a first slurry being selective to said barrier layer; and  
    polishing said exposed barrier layer by using a second platen and a second slurry.

**[Claim 2]** 2. The chemical mechanical polishing process according to claim 1 wherein said first slurry has a copper to barrier polishing selectivity of greater than 30.

**[Claim 3]** 3. The chemical mechanical polishing process according to claim 2 wherein said first slurry has a copper to barrier polishing selectivity of above 100.

**[Claim 4]** 4. The chemical mechanical polishing process according to claim 1 wherein said first slurry contains alumina.

**[Claim 5]** 5. The chemical mechanical polishing process according to claim 1 wherein said second slurry contains alumina.

**[Claim 6]** 6. The chemical mechanical polishing process according to claim 1 wherein said first slurry contains silica.

**[Claim 7]** 7. The chemical mechanical polishing process according to claim 1 wherein said second slurry contains silica.

